

**ABSTRACT**

A method for detecting current leakage of a film on a substrate. The film is repeatedly irradiated with an electron beam, thereby causing the film to emit x-rays. The emitted x-rays are detected with an x-ray detector, the detected x-rays emitted with each repeated irradiation of the film are counted to produce an x-ray count rate. The trend of  
5 the x-ray count rate is determined, and the current leakage of the film is determined from the trend of the x-ray count rate.

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